

NON-PUBLIC?: N  
ACCESSION #: 9307220219  
LICENSEE EVENT REPORT (LER)

FACILITY NAME: VOGTLE ELECTRIC GENERATING PLANT - PAGE: 1 OF 3  
UNIT 2

DOCKET NUMBER: 05000425

TITLE: MANUAL REACTOR TRIP DUE TO MAIN FEEDWATER REGULATING  
VALVE FAILING CLOSED

EVENT DATE: 06/28/93 LER #: 93-004-00 REPORT DATE: 07/16/93

OTHER FACILITIES INVOLVED: DOCKET NO: 05000

OPERATING MODE: 1 POWER LEVEL: 99

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR  
SECTION:

50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:

NAME: MEDHI SHEIBANI, NUCLEAR SAFETY TELEPHONE: (706) 826-3209  
AND COMPLIANCE

COMPONENT FAILURE DESCRIPTION:

CAUSE: B SYSTEM: SJ COMPONENT: CPOS MANUFACTURER: W120  
B IG JC W120

REPORTABLE NPRDS: Y  
Y

SUPPLEMENTAL REPORT EXPECTED: NO

ABSTRACT:

On June 28, 1993, at 0456 EDT, Unit 2 was operating normally when a steam flow/feed flow mismatch alarm was received for steam generators (SG) 2, 3, and 4. Operators observed SG 2 feedwater flow at approximately zero, narrow range (NR) level instrumentation trending down to approximately 45 percent, and main feedwater regulating valve (MFRV) 2 closed. All main feedwater isolation valves (MFIV) and bypass feedwater isolation valves (BFIV) were verified open. With SC water level dropping at a fast rate, the unit shift supervisor (USS) directed the reactor operator (RO) to manually trip the reactor at 0457 EDT. Appropriate procedural steps were implemented to return SG levels to normal and place the unit in a stable condition.

Troubleshooting determined that the cause of this event was the failure of the MFRV 2 tracking/driver card. This card supplies the control signal for MFRV valve position. The card failure caused the valve demand signal to fail low, and MFRV 2 closed, resulting in reduced feed flow to SG 2. The failed circuit card was replaced and will undergo failure analysis.

END OF ABSTRACT

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#### A. REQUIREMENT FOR REPORT

This report is required per 10 CFR 50.73 (a)(2)(iv) because an unplanned actuation of the reactor protection system (RPS) occurred.

#### B. UNIT STATUS AT TIME OF EVENT

At the time of this event, Unit 2 was operating in Mode 1 (power operation) at 99 percent of rated thermal power. Other than that described herein, there was no inoperable equipment that contributed to the occurrence of this event.

#### C. DESCRIPTION OF EVENT

On June 28, 1993, at 0456 EDT, Unit 2 was operating normally when a steam flow/feed flow mismatch alarm was received for steam generators (SG) 2, 3, and 4. Operators observed SG 2 feedwater flow at approximately zero, narrow range (NR) level instrumentation trending down to approximately 45 percent, and main feedwater regulating valve (MFRV) 2 closed. All main feedwater isolation valves (MFIV) and bypass feedwater isolation valves (BFIV) were verified open. With SG water level dropping at a fast rate, the unit shift supervisor (USS) directed the reactor operator (RO) to manually trip the reactor at 0457 EDT. Appropriate procedural steps were implemented to return SG levels to normal and place the unit in a stable condition. Both neutron source range detectors were energized as required, but channel N32 malfunctioned and did not indicate onscale. Channel N32 was removed from service for troubleshooting. The motor driven auxiliary feedwater (AFW) pumps were used to maintain SG water levels in Mode 3 (hot standby).

#### D. CAUSE OF EVENT

Troubleshooting determined that the cause of this event was the

failure of the MFRV 2 tracking/driver card. This card supplies the control signal for MFRV valve position. The card failure caused the valve demand signal to fail low, and MFRV 2 closed, resulting in reduced feedwater flow to SG 2.

An investigation of the malfunction of source range channel N32 revealed a failure of the channel's pulse driver circuit card which caused the indicator to fail downscale.

#### E. ANALYSIS OF EVENT

During this event, the reactor was manually tripped and the AFW pumps actuated as designed to provide feedwater to the SGs, ensuring unit safety during this transient. Manually tripping the reactor reduced the challenges that an automatic trip would have placed on plant safety systems and provided a more controlled approach to placing the unit in a stable condition. Based on these considerations, there was no adverse effect on plant safety or the health and safety of the public as a result of this event.

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#### F. CORRECTIVE ACTIONS

The failed circuit card for the MFRV position controller was replaced. A failure analysis will be performed on the failed circuit card, and any further corrective actions will be based on the results of the analysis.

The pulse driver circuit card for source range channel N32 was replaced, and the channel was returned to service.

#### G. ADDITIONAL INFORMATION

##### 1. Failed components

Tracking/driver circuit card manufactured by Hagen Controls/Westinghouse.  
Part No. 2838A45G01

Pulse Driver Card manufactured by Westinghouse  
Part No. 3378C23G01

##### 2. Previous Similar Events

None

3. Energy Industry Identification System Code

Main Feedwater System - SJ

Auxiliary Feedwater System - BA

Nuclear Instrumentation System - IG

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C. K. McCoy Georgia Power  
Vice President, Nuclear  
Vogtle Project the southern electric system

July 16, 1993  
LCV-0073

Docket No. 50-425

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D. C. 20555

Gentlemen:

VOGTLE ELECTRIC GENERATING PLANT  
LICENSEE EVENT REPORT  
MANUAL REACTOR TRIP DUE TO MAIN  
FEEDWATER REGULATING VALVE FAILING CLOSED

In accordance with the requirements of 10 CFR 50.73, Georgia Power Company submits the enclosed report related to an event which occurred on June 28, 1993.

Sincerely,

C. K. McCoy

CKM/NJS

Enclosure: LER 50-425/1993-004

xc: Georgia Power Company

Mr. J. B. Beasley

Mr. M. Sheibani

NORMS

U. S. Nuclear Regulatory Commission

Mr. S. D. Ebnetter, Regional Administrator

Mr. D. S. Hood, Licensing Project Manager, NRR

Mr. B. R. Bonser, Senior Resident Inspector, Vogtle

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